Integrated Water Quality and Aquatic Communities Protocol – Lakes and Ponds

Standard Operating Procedure (SOP) #15: Post-Field Season

Draft Version 1.0

Revision History Log:

Previous Version	Revision Date	Author	Changes Made	Reason for Change	New Version

This SOP explains procedures that will be completed after the field season, which include handling equipment, data forms, communication with NPS personnel, and reporting. Technicians and interns will assist the Project Lead in completing post season field tasks. This SOP is based on a similar SOP for the Klamath Network Landbird Community Monitoring Protocol (Stephens et al. 2009).

Clean, Inventory, and Store Field Equipment

1. All equipment should be inventoried.
2. All equipment should be cleaned, determined to be in working order, and stored in the proper storage location. Equipment should be prepared for long-term storage (2 years in some cases), including the removal of batteries.
3. Record broken or missing equipment on the inventory sheet. Label the equipment with sufficient information so that someone else will understand the specific problem.
4. Report missing or faulty equipment and/or equipment needing repairs to the Project Lead immediately so that equipment can be repaired or replaced before the following field season. The Project Lead should schedule a time to inform the Network Coordinator about needed repairs, purchases, and projected costs early in the fiscal year planning process (i.e., no later than November 1 following the field season).
5. Vehicles should be filled up with fuel and other fluids (oil, coolant, wiper fluid) and the inside and outside should be thoroughly cleaned. Mileage reports and vehicle maintenance forms should be submitted to the Project Lead.
6. After all data have been backed up (in accordance with previous SOPs), electronic equipment should be checked in to the Data Manager.

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GIS Post-Processing and Organization

The GIS Specialist is responsible for:

1. Check in field data to the GPS-enabled Geodatabase and uses GPS Analyst and the field-recorded SSF files to further correct the positioning of the data.
2. Corrected GPS data then will be given FGDC-compliant metadata using ArcCatalog metadata tools and will include notes about processing techniques and final GPS accuracy. These files then will be saved to the network server at \Water_Quality_Monitoring\Lakes\Lakes_GIS.
3. Using GIS tools, calculate lake circumference, numbers of invertebrate sweeps per lake and per habitat type, numbers of amphibian searches per lake and per habitat type, and the percentage of lakeshore composed of each habitat type. Transfer the results to the server Water_Quality_Monitoring\Lakes\Lakes_Analysis.
4. The GIS Specialist will also perform quality control checks of the GIS data for correct projection definitions, logical consistency with other GIS data layers, and complete metadata viewable in ArcCatalog.
5. Once the GIS Specialist has completed his/her tasks, the Project Lead should review the shapefiles and work with the GIS Specialist to cleanup and additional issues.
6. Once quality control checks are done, GIS data from each survey year will be imported into one master Geodatabase for Water Quality Monitoring that includes all of the Network parks. This is located on the KLMN server at \\Data_Management\GIS\database\klmn\data\monitoring\Water_Quality.

Data Forms

Data forms should be submitted to the Project Lead at the end of each sampling event. At the end of the field season, it is the Project Lead's responsibility to:

1. Ensure that all surveys have been completed.
2. Ensure that all data have been entered into the databases.
3. File extra field forms in the proper file cabinet for the following year.
4. Organize the datasheets into the proper format. One PDF document will be made for each lake and the file will be named using the project name, lake name, and year surveyed. Datasheets should be organized by:
    - Lake Name Folder
        - Main field sheet
        - Fish field sheet (if any)
5. The file should be named with the following conventions:
    - Parkcode_LakeName_GRTS_Year.pdf for the main field sheet (e.g., LAVO_Lake_Helen_000_2008.pdf)
    - Parkcode_LakeName_Fish_GRTS_Year.pdf for the associated fish sheet (e.g., LAVO_Reflection_Lake_Fish_300_2008.pdf

SOP #15: Post-Field Season (continued).

Close-out

The Project Lead should communicate with the Park Contact to determine whether keys and/or other equipment need to be returned. Once keys and equipment have been returned, the Network Contact should be notified.

Field Season Reporting

The Field Crew Leader should prepare a brief report (generally not more than three pages) that includes the following:

1. Clear enumeration of which lakes/ponds were completed during the season.
2. Description of any logistic difficulties that arose and explanation of how they were addressed.
3. Clear documentation and explanation of any diversions from established protocols.
4. Discussion of any interesting or potentially important observations that may have been noted during the field season
5. Suggestions for improving the training session or field season logistics in the future.

After this brief report, there should be a debriefing session in which the entire field crew and the Project Lead discuss the field season and any issues in the report. The Network Coordinator and Network Data Manager are encouraged to attend this meeting.

Electronic Equipment

The Field Crew Leader should make certain all electronic equipment is cleaned and in working order. Electronic equipment includes the tablet PCs, GPS units, Trimble units, and cameras. Upon submitting the equipment for check in, all project related materials (images, databases, documents, and shapefiles) should be removed for these units.